DOCUMENT RESUME

ED 271 476 SP 027 850

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TITLE Curriculum Fidelity and Implementation Tasks Employed by Teachers.
PUB DATE Apr 83
NOTE 27p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Canada, April, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150) -- Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Curriculum Development; Elementary School Curriculum; Elementary Secondary Education; *Program Implementation; Secondary School Curriculum; *Teacher Attitudes; *Teacher Participation

ABSTRACT

This study sought to determine the degree of congruence between a planned curriculum and that actually being taught in one large midwestern suburban school district and the implementation tasks employed by teachers. In measuring curriculum congruence it was found that, while the district expects fidelity of its planned curriculum, adaptation by teachers at the various grade levels for their school was a common practice. The investigation revealed a lack of congruence between the district's specified curriculum and what was being taught, especially at the secondary level. In the second stage of the investigation it was discovered that teachers' beliefs and practices about the importance of and the participation and involvement in curriculum implementation tasks were more pronounced for those who were most closely attending to the curriculum prescribed by the district. The results of this study indicated a need for further research to investigate teacher beliefs and practices about curriculum implementation tasks in relation to the nature or characteristics of the curriculum being implemented, the expectations of the adopting unit, and the support system for implementing the pre-specified curriculum. (JD)

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Curriculum Fidelity
And Implementation Tasks Employed by Teachers

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Introduction

The Rand Studies represent a major landmark for curriculum implementation research. An extensive study of change agent programs was undertaken by Berman and McLaughlin (1973) to provide a theoretical perspective for those studies. They reported that the most difficult and complex part of the problem of curriculum change has to do with post-adoption behavior, the process of implementation. In their review of research, which focused on an organizational model of institutional behavior, these writers reported that in almost all of the instances studied adoption was not an issue. Problems of implementation dominated the outcome and the success of all projects studied.

The intense concerns that school districts have about curriculum implementation and the reasons for this concern have continued unabated since the time of the Rand Studies. Loucks and Leiberman (1983) stated, "only in the last ten years has curriculum implementation become a major concern of our educational systems. This concern has resulted

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Paper presented at the annual meeting of the American Educational Research Association, Montreal, April, 1983.

SP 027 850

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partially from the expenditure of millions of dollars on development and partially from the realization that relatively few new ideas make it 'behind the classroom door'" (p.126). According to Loucks and Leiberman (1983), "Findings from research in implementation are inconclusive and contradictory. It is not yet known what should be done to successfully implement new curriculum in different settings, under different conditions" (p.126). The cost in real dollars, as well as gaps in students' education, may be alleviated if better answers can be found.

In this paper a selective review of relevant literature will be explored in order to establish a framework for the research to be presented. This review explores orientations and specific dimensions of curriculum implementation research, and presents an overview of methods that have been used for measuring implementation. This discussion will be followed by a presentation of the design of the study, the research methods employed, the findings and the implications of the study.

Dimensions of Curriculum Implementation Research

Several writers have provided a perspective on implementation research. Fullan and Pomfret (1977) indicated that there are two orientations to implementation studies: 1) the extent to which the actual use of an innovation corresponds to intended use--fidelity of implementation, focusing on either the organization or the curriculum itself; and, 2) an analysis of the complexities of the change process--how the innovations are developed/changed, etc. during the implementation process. A second perspective on

implementation research has been provided by Loucks and Leiberman (1983), who indicate that curriculum implementation has focused on three areas: 1) the process of adoption or selection of the curriculum to be implemented; 2) the characteristics of the adopting unit in which the curriculum is to be implemented; 3) the support system provided for implementing curriculum.

The variables or potential variables affecting the implementation of innovations have also been addressed in educational literature. Berman and McLaughlin (1973) proposed a conceptual framework for directing research on implementation. This framework included: 1) organization status, (e.g. wealth, level of per pupil expenditure); 2) attributes of principal actors (e.g. level of education of superintendent, principal, project directors); 3) organizational capacity to innovate (e.g. locus of decision-making, leadership styles); 4) initial characteristics of the project (e.g. prior planning and testing); and, 5) institutional characteristics (e.g. degree of staff participation in decision-making). Fullan and Pomfret (1977) have also identified a number of variables considered to be determinants of implementation. These include: 1) characteristics of the innovation; 2) strategies and tactics necessary to implement change; 3) characteristics of adopting units; and, 4) characteristics of socio-political units.

Loucks and Leiberman (1983) indicated that we can recognize some major understandings about the process of change and the context in which curriculum implementation is found to be effective. Fertile

areas of research include 1) adult development--how teachers change as they confront new ideas, the kinds of personal, material, interactive support needed; 2) teacher participation in decision-making; and, 3) teacher support--material, human, time, peers.

Curriculum Implementation Research

An overview of selected curriculum research, presented in relation to the dimensions of curriculum implementation research referred to above, will aid in clarifying how existing research relates to these dimensions. This review will also highlight the need for further research.

In regard to the attributes or characteristics of an innovation, two were found to relate to implementation. These are explicitness or plans for explicitness for implementing (Gross, et al. 1971) and complexity or degree and difficulty of change (Crowther, 1972). Low explicitness of plans resulted in user confusion, frustration, and uncertainty about what the change entailed. Perceived complexity of implementation was significantly related to the degree of implementation of curricula.

One strategy or tactic important for implementation is in-service training. A number of studies have shown that teacher in-service training was directly related to the degree of implementation of curriculum (e.g., McDonald and Walker, 1974). Resource support (Shipman, 1974), feedback mechanisms (Zaitman, et.al. 1973), participation in decision-making, (Berman and Pauly, 1978, Louis, 1980) and curriculum development activities (Duet, 1972) also increase the likelihood of successful implementation.

There is much needed research in regard to the characteristics of adopting units that have effective implementation. In regard to research that has focused on the organizational process characteristics of adopting units, Rand researchers indicated that project outcomes depended more on the characteristics of the project's setting than any other factor. Specifically they found that teachers' commitment, active support of principals and general support of superintendents and other central office personnel all enhanced the likelihood of teacher change and perceived success (Berman and McLaughin, 1976).

Very little research has been done regarding implementation where secondary schools were the adopting units. Fullan and Eastabrook (1973) did find, however, that there were important differences in orientation to change between elementary and secondary school teachers, and Poll (1970) found that high school teachers were less willing to plan. Berman and Pauly (1975) reported that perceived success of implementation was greater for elementary school projects than for junior or senior high school projects.

Fullan and Pomfret (1977) indicated that the following types of macro-socio-political factors appear to have significant impact on degree of implementation: design issues, incentive systems, the role of evaluation and political complexity. Lack of time and energy, teacher overload, and multiple demands were frequently cited as major implementation problems teachers face (e.g. Berman and Pauly, 1975, Downey, et.al.1975).

Methods of Measuring Curriculum Implementation

In this section of the report the methods of measuring curriculum implementation will be discussed and the advantages and disadvantages of each will be presented. A review of curriculum implementation research methods indicated that the most common measurements utilized in conducting studies include observation techniques, focused interviews, questionnaires, and content analysis of key documents and specific curriculum plans.

The method of classroom observation to determine the extent to which a curriculum is being implemented as planned is considered a highly valid measure of implementation. Fullan and Pomfret (1977) indicated that "... the use of observation probably represents the most rigorous measurement of behavioral fidelity or degree of implementation if the innovation is reasonably well specified" (p.365). Studies have shown that high interrater reliability coefficients can be achieved. Problems associated with this measurement method included 1) failure to identify specific dimensions or criteria to be utilized in making observation, and 2) to have observers become so dependent upon the observation instrument that it becomes mechanical and other classroom dimensions are ignored. Unanswered questions still remain about the influence observers have on the performance of those who are implementing the curriculum.

The results of studies done by Goodlad, Klein, et.al., (1970) would call into question the use of questionnaires for determining the degree of curriculum implementation. In these studies considerable discrepancy was noted between teachers' reports of

curriculum implementation and what was noted by classroom observers. Several studies carried out with the use of questionnaires with validity checks using observation indicated that questionnaires were effective for measuring the degree of implementation, however. (Crowther, 1972, Cole, 1971).

Focused interview technique is another means that has been utilized for determining the degree of curriculum implementation (Hall and Loucks, 1976). In this technique, teachers are asked to respond to a series of questions enabling the interviewer to determine the level of use of the curriculum by the teacher. These data are gathered to determine the level of effective use of a given innovation.

Another form of measurement for determining curriculum implementation is to analyze the content of curriculum materials and teacher plans (Downey, et.al. 1975). In this manner it would be possible to determine their congruence with the curriculum intended for implementation.

Each of the measurement methods have their advantages and disadvantages. Direct observation is time consuming, and therefore, expensive, even though it is considered to provide the most valid measurement. Questionnaires have potential for reaching a large population quite inexpensively and can provide valid results if used in combination with observations/interviews of a sample of study participants. Focused interviews and document analysis allow for a thorough assessment and are less time consuming and expensive than observations.

Implications for Further Research

After reviewing selected literature relating to the various dimensions of curricular implementation, and variables which influence the process, a number of generalizations could be made. Several will be highlighted as they relate to this study.

I. Curriculum implementation is an intense concern of school districts. This concern relates not only to the cost of adoption of the new curriculum but also a cost effective way of determining whether it is being implemented as planned. In this period of financial retrenchment in education, decisions will be based on information provided by individuals within the system when few school districts can afford to employ someone from outside the system to conduct program audits.

II. The major orientation to implementation research is fidelity--the extent to which the curriculum being taught corresponds to intended use. To know whether there is congruence between intended and actual use of a curriculum, while valuable information in its own right, is not the only concern of a school district if fidelity is not found. A parallel concern is to identify what are contributing factors that help or hinder effective implementation. Curriculum fidelity, or lack of it, can only be effectively measured by questioning or observing teachers, or analyzing documents used by them. Ultimately, it is the teacher who implements or fails to implement a curriculum as planned.

III. The primary unit of curriculum adoption is the classroom. To be more specific, the critical dimensions of curriculum implementation may rest in teachers' perceptions of the degree to which they are

implementing a pre-specified curriculum and what they perceive to be important implementation tasks. Other important teacher perceptions, as they relate to curricular implementation, may be tasks they would like to carry out versus those they actually accomplish. The classroom teacher becomes a primary unit of assessment regarding implementation.

The study presented here is an exploratory investigation of what implementation tasks are carried out by teachers who effectively implement pre-specified curriculum. The initial step to the study was to determine the congruence between the planned curriculum and that actually being taught by teachers in one school district. The second step was to determine the perceptions of this teacher sample about the importance of, desired participation, actual involvement in, and constraints in carrying out implementation tasks. The measurement method employed was teacher self-reporting with a selected sample of teacher interviews as a validity check.

Research Methods and Procedures

The major research question posed in this study was:

What implementation tasks are carried out by teachers who effectively implement prespecified curriculum? To answer this question it was necessary to:

1. determine the fidelity of the planned and actual curriculum for each individual teacher
2. determine the teachers' perceptions of the perceived importance of prespecified curriculum implementation tasks
3. determine the teachers' perceptions of their desired participation in prespecified curriculum implementation tasks

4. determine the teachers' actual involvement in a series of prespecified curriculum implementation tasks.

5. determine teachers' perceptions of constraints, either personal or institutional, in carrying out implementation tasks.

Teachers' responses in regard to both fidelity and tasks were analyzed according to grade level taught.

The study was carried out in one large midwestern suburban school district with a student enrollment of 13,623 and a teaching staff of 821 in 12 elementary, two junior high and two senior high schools. This district was selected for its clearly defined curriculum for grades K-12 in all subject areas. The curriculum has been quite narrowly defined by specification of objectives/concepts and amount of emphasis for these objectives at each grade level. Content/Topics, resources/materials, activities/teaching strategies, and student evaluation have been left to the determination of teaching staff. As a consequence of this teacher autonomy, the study was able to focus on actual curriculum implementation, relatively free of extraneous instructional variables.

The study was conducted in the language arts subject area, in three elementary schools, one junior high school, and one senior high school in the district. The total number of teachers who participated in the study, by grade level, was 53 elementary teachers, 13 junior high and 8 senior high teachers. In order to conduct the study, it was necessary to develop two questionnaires and a form for conducting a structured interview with a small sampling of teachers. The Objective Implementation Assessment(OIA) questionnaire was developed after a careful review of the language arts objectives, with 25-35 objectives selected for each of the four grade levels, as listed in the district's Language Arts Curriculum Guide:

Scope and Sequence of Goals. Separate versions of this assessment instrument were then developed for teachers at the four grade levels--primary, intermediate, junior high, senior high--based on the objectives selected for those levels. Listed below are examples of objectives/concepts included in the Objective Implementation Assessment.

1. Understand and apply basic rules of punctuation and capitalization.
2. Know common homonyms, synonyms, and antonyms
3. Develop visual discrimination
4. Record information clearly and accurately
5. Identify parts of speech according to function
6. Identify sensory images and responses to a variety of kinds of poetry
7. Understand principles of expository writing
8. Demonstrate competency in oral communications of ideas and emotions.

The instrument enabled teachers at each grade level to indicate what they teach and don't teach, as well as the amount of emphasis actually given to each objective, using a six-point Likert Scale.

A second questionnaire, Curriculum Implementation System Assessment (CISA) was used to assess 28 tasks teachers may potentially employ to implement a prespecified curriculum. The tasks, divided into four categories relating to curriculum implementation, were validated by nationally recognized experts who are members of the Council of Professors of Instructional Supervision (COPIS). Listed below are representative implementation tasks, and the categories or areas with which they were identified.

Section I. Objectives

Use general objectives to identify the most appropriate instructional objectives for my grade level/course(s)
Determine the sequence for presenting the general and instructional objectives identified for my grade level/course(s).
Link topics/content/concepts to general objectives for my grade level/course(s).

Section II. Instructional Plans

Identify a range of instructional methods to use in my grade level/course(s) (e.g. discovery, problem solving, lecture, question-answer).
Identify a range of instructional strategies to use in my grade level/course(s) (e.g. lesson design, effective practice, motivation, corrective feedback).
Write specific lesson plans.

Section III. Theory Into Practice

Apply principles from learning theory to the design and development of my instructional plans (e.g. concern for transfer of learning, retention of knowledge).
Apply principles from instructional theory to the design and development of instructional plans (e.g. maximizing time on task, regularly providing feedback).
Interpret the significance of learning research findings for my instructional plans (e.g. learning styles, time on task and student achievement).

Section IV. Evaluation

Diagnose each student's entering knowledge and skills in my grade level/course(s) (e.g. preassessment of student's learning).

Diagnose individual learning style preference(s) of students in my grade level/course(s) (e.g. field dependence/independence; right/left brain specialization).
Develop procedures for evaluating how well the students in my classroom have attained grade level or course objectives.

The teachers responded to the 28 curriculum implementation tasks in terms of Perceived Importance of, Desired Participation in, and Actual Involvement in these tasks. Another response category, Constraints, enabled teachers to indicate what they perceived as hindrances in carrying out implementation tasks they might consider important.

Both instruments, the OIA, and the CISA, were administered at the same time to teachers in their respective schools, either in a group setting or on an individual basis. The teacher interview form served as a check on the teachers' responses to the two questionnaires. Two teachers each from the primary, intermediate, junior high and high school were interviewed individually for a period of approximately 45 minutes about questions relating to the district language arts: 1) scope and sequence; 2) content and activities selection; 3) materials and resources; 4) time allocation; 5) teacher in-service program; and 6) learning activity description.

Study Results

The congruence between the amount of emphasis teachers indicated that they give to the language arts objectives, in comparison with the school district's prescribed emphasis, is shown in Table 1. The column on the left serves as a reference point for showing how many teachers at the various grade levels are teaching what number of objectives at a level consistent with that specified by the school district.

Table 1

Faculty Agreement with District Specified Emphasis for Language Arts Objectives.

Number of Agreed Upon Objectives	Number of Teachers in Agreement, By Grade Level			
	Primary(N=26)	Intermediate(N=27)	Junior High(N=13)	Senior High(N=8)
1	0	0	0	0
2	0	0	0	0
3	1	2	0	1
4	1	1	1	0
5	3	1	3	1
6	2	0	0	1
7	2	2	0	1
8	1	3	1	0
9	5	5	1	0
10	2	0	1	1
11	0	1	1	1
12	3	2	0	0
13	3	4	2	0
14	1	1	1	0
15	2	1	0	1
16	0	2	1	0
17	0	0	0	0
18	0	1	0	1
19	0	0	1	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	1	0	0
24	0	0	0	0
25	0	0	0	0

As can be seen from these data, the faculty agreement with district specified emphasis for the language arts objectives was extremely low. The range of actual/specified correspondence in objective implementation was 3 to 18 out of 35 objectives sampled at the senior high level; 4 to 19 out of 32 at the junior high; 3 to 23 out of 30 at the intermediate grades; and 3 to 15 out of 25 objectives listed for primary grades.

In the Table that follows(Table 2), a summary of the mean number of objectives for which the amount of emphasis teachers give was congruent with the amount

of emphasis the district has specified for those objectives is shown. These data are indicated for primary, intermediate, junior high and senior high teachers.

Table 2

Mean Number of Objectives In Which Teacher Emphasis is Congruent With Specified Emphasis

Teacher Grade Level	Total Number of Objectives	Mean Number of Objectives	Standard Deviation	Mean % of Possible Objectives
Primary	25	9.23	3.51	37%
Intermediate	30	10.63	4.70	35%
Junior High	32	10.15	4.72	31%
Senior High	35	9.38	5.15	27%

Because the Objective Implementation Assessment (OIA) specified objectives for the four different grade levels, the number of objectives varied. Therefore, the mean responses were converted to mean percentages (Table 2) of the total number of objectives for each grade level. The percentages provide more meaningful data and indicate that primary teachers most closely follow the specified objectives of the language arts curriculum. As one moves up the ladder of grades, the less one finds teachers giving the amount of emphasis the district has specified to the objectives.

As a result of administering the Curriculum Implementation System Assessment (CISA) it was possible to identify several relevant findings in this exploratory study. Data which related to those findings

are presented in Tables 3, 4 and 5. Teachers were categorized as high or low implementors on the basis of the number of responses above or below the mean in their agreement with district specified objectives for their grade level.

Table 3

Results of T-Tests Comparison of Low and High Implementors On Perceived Importance of Curriculum Implementation Tasks.

Group	N	Mean	Standard Deviation	Two-Tailed Probability (Pooled Variance)
Primary				
Low Implementors	10	125.00	15.78	.039*
High Implementors	16	139.00	16.09	
Intermediate				
Low Implementors	14	137.07	12.26	
High Implementors	13	139.15	10.92	.645
Junior High				
Low Implementors	6	131.50	17.13	.237
High Implementors	7	114.14	29.93	
Senior High				
Low Implementors	4	121.25	12.09	.043*
High Implementors	4	144.50	13.53	

* Denotes Significance at .05 level

Table 4

Results of T-Tests Comparison of Low and High Implementors
On Desired Involvement In Curriculum Implementation Tasks

Group	N	Mean	Standard Deviation	Two-Tailed Probability (Pooled Variance)
Primary				
Low Implementors	10	125.4	16.60	.144
High Implementors	16	135.3	15.92	
Intermediate				
Low Implementors	14	134.21	15.89	
High Implementors	13	138.23	12.70	.477
Junior High				
Low Implementors	6	130.67	25.82	
High Implementors	7	113.29	34.34	.332
Senior High				
Low Implementors	4	127.25	17.95	
High Implementors	4	144.75	20.01	.241

Table 5

Results of T-Test Comparison of High and Low Implementors
On Actual Involvement In Curriculum Implementation Tasks

Group	N	Mean	Standard Deviation	Two-Tailed Probability (Pooled Variance)
Primary				
Low Implementors	10	124.30	16.73	
High Implementors	16	129.81	16.29	.414
Intermediate				
Low Implementors	14	124.50	14.54	
High Implementors	13	128.31	10.63	.448
Junior High				
Low Implementors	6	120.00	32.88	
High Implementors	7	106.00	36.75	.488
Senior High				
Low Implementors	4	125.75	16.88	
High Implementors	4	134.25	31.87	.654

The results of the T-Tests (Tables 3, 4, 5) indicate that there were significant differences ($P < .05$)level in beliefs between high and low curriculum implementors at the primary and senior high grade levels only on perceived importance of curriculum implementation tasks. No significant differences were found between the beliefs of high and low curriculum implementors about the perceived importance of curriculum implementation tasks at the intermediate and junior high grade levels. In addition, no significant differences were found in the responses of high and low curriculum implementors at any grade level in regard to Desired Participation and Actual Involvement in curriculum implementation tasks. It is especially noteworthy, however, that teachers who more closely followed the prespecified curriculum at all grade levels, except junior high teachers, attached greater importance to, expressed greater desire to participate in, and were more involved in curriculum implementation tasks than those who were less inclined to follow the prescribed curriculum.

The Curriculum Implementation System Assessment (CISA) was designed to include items that focus on four different implementation task categories or areas: 1) Objectives; 2) Instructional Plans; 3) Theory Into Practice; and, 4) Evaluation. T-Test results from high and low curriculum implementors at the four grade levels permits further analysis of teacher beliefs and practices in each of these four categories.

Because significant differences were found primarily among teachers' beliefs about perceived importance of the four implementation tasks only these data are shown in table form (Table 6).

Table 6

Results of T-Test Comparisons of
High and Low Implementors on Perceived Task
Importance by Task Categories

Group	Objective Tasks			Instructional Planning Tasks			Theory/Practice Tasks			Evaluation Tasks		
	$\bar{X}$	SD	P	$\bar{X}$	SD	P	$\bar{X}$	SD	P	$\bar{X}$	SD	P
Primary												
Low	40.10	5.47	.760	43.10	5.95	.047*	21.40	4.90	.102	25.00	4.99	.001**
High	40.75	5.08		47.69	5.11		24.56	4.44		31.44	3.69	
Intermediate												
Low	40.64	4.40	.705	47.43	6.04	.924	22.36	4.63	.088	31.64	2.34	.355
High	39.92	5.36		47.23	4.48		25.08	3.10		32.54	2.60	
Junior High												
Low	41.17	5.35	.352	47.50	3.94	.108	20.17	6.62	.514	27.67	2.68	.416
High	36.86	9.63		39.86	10.00		17.57	7.16		24.57	2.50	
Senior High												
Low	41.00	.82	.081	39.00	6.16	.134	21.00	2.71	.134	25.00	3.56	.016*
High	44.25	2.99		47.25	7.27		25.50	4.44		32.75	2.99	

** Denotes Significance at .01 level
* Denotes Significance at .05 level

For teachers in the primary grades significant differences between high and low implementors were found in their views about Perceived Importance of implementation tasks relating to Instructional Plans ($P<.05$), Evaluation ($P<.01$) The only other instance of significant differences was among primary grade high and low implementors on Desired Participation in implementation tasks, relating to Evaluation ($P<.05$).

The responses of teachers at the intermediate and junior high school levels indicated that there were no significant differences among high and low implementors in regard to Perceived Importance, Desired Participation, and Actual Involvement in any of the four curriculum implementation task areas. For teachers at the senior high level significant differences were found among high and low implementors only in the category of Perceived Importance of Evaluation tasks ($P<.05$)

A final area of concern in this study was to ask teachers to identify factors that constrain their carrying out what they consider to be important curriculum implementation tasks. Teachers were considered to be expressing dissatisfaction with their implementation role if the discrepancy between desired and actual involvement exceeded .5. It was further assumed that in those cases where the discrepancy existed and, at the same time, Actual Involvement was at least .5 below Desired Participation, teachers felt they were unable, for a variety of reasons to fully carry out that task. Such discrepancy existed for 13 of the 28 tasks. The overwhelming constraint was "lack of time" followed by "no established process" and "not expected of me".

The results of the teacher interviews made it possible to gain an overall picture of their views about the curriculum and support systems for implementing it. For teachers at the elementary levels there was an indication that there were too many objectives specified for each grade level, that some objectives were too difficult for some students, and that the meanings of some objectives were not always clear enough to implement. In general, however, elementary teachers believed that the objectives were realistic and appropriate. Teachers at these levels also indicated that they tended to use the district scope and sequence as a guide for planning at the beginning of the year, and as a periodic check during the year.

The results of the teacher interviews at the secondary levels presented a slightly different picture of their views about the curriculum and the support systems for implementing it. Teachers at these levels were pleased with the flexibility of the guide, because content and teaching materials were not specified. The teachers reported that they tended to review the curriculum at the building level when it was first distributed, and developed a grade-by-grade adaptation. Once Teachers had developed a plan from the curriculum, it was the plan that served as the basis for the next year's teaching. This process, it appeared, was what guided teachers, not the scope and sequence itself.

Summary, Implications, Conclusions

The measure of curriculum fidelity by teacher self reporting, combined with interviews, was found in this study to be an effective measure of the degree of curriculum implementation. Teachers' responses to the interview questions were consistent with answers

on the Objective Implementation Assessment(OIA), which indicated what they were teaching and with what amount of emphasis. Further evidence of the validity of their answers can be ascertained by the wide range of responses. Some teachers indicated that they were giving the amount of emphasis specified by the school district to as few as three, or as many as 23 objectives. The interviews pointed to some reasons for the lack of congruence between actual and specified teaching emphasis. It was found, however, that teachers in the elementary grades were much more apt to implement the language arts curriculum as specified by the district than were secondary teachers. In general, the degree of curriculum implementation,as measured in this study,was extremely low at all four grade levels.

The Curriculum Implementation System Assessment(CISA) was administered to determine what implementation tasks are carried out by teachers who effectively implement prespecified curricula. The teachers' responses to the Curriculum Implementation System Assessment were analyzed in relation to the degree to which they were implementing this curriculum. The instrument requests responses to 28 curriculum implementation tasks to measure teachers'views of Perceived Importance, Desired Participation, and Actual Involvement in the tasks. The differences in responses between those teachers with high and low curriculum congruence were statistically significant for Perceived Importance of tasks but only at the primary and senior high grade levels. The most noteworthy finding of the study, however, was that those teachers who most closely follow the prespecified curriculum attached greater importance to implementation tasks and their involvement with them. This finding was true for those teachers with the highest degree of implementation at all grade levels, except junior high school.

Implications

This study of curriculum fidelity and teacher implementation beliefs and practices has several implications for educational practice and further research. There is need for careful consideration of what is meant by curriculum implementation, how it is to occur, and how it is to be measured. It was quite apparent in this study that teachers were making greater efforts to adapt, rather than adopt, the prespecified curriculum. When discrepancies between the actual and the designated curriculum is found, is it a matter of poor implementation practices or that the curriculum is inappropriate? During the interviews teachers often reported a sense of too much to teach and/or the inappropriateness of the curriculum for students at their grade level. Prescribing the emphasis teachers are to give to the curriculum at specific grade levels, if seen as a rigorous measure of curriculum implementation, leaves little room for individualization to meet legitimate student needs.

There were several constraints that teachers indicated were hampering them in carrying out desirable curriculum implementation tasks. Although lack of time was identified as the overriding constraint, others prominently mentioned were their own lack of capability and the absence of an established process in the district for carrying out the task. Both constraints have implications for a district's curriculum implementation support system.

This study also revealed that there was declining fidelity of the curriculum at higher grade levels. Does this simply result from

insistence on greater autonomy by secondary school teachers? A second, but related, question pertains to an increase in specificity of course offerings and students' needs beyond the elementary grades. Do teachers not only expect greater freedom in curriculum decision-making, but also require more autonomy because of the more specific nature of courses and greater range in student abilities at the secondary school level?

Conclusions

The purpose of this study was to determine relationships among the degree of congruence between a planned and actual curriculum and the implementation tasks employed by teachers. In measuring curriculum congruence it was found that, while the district expects fidelity of its planned curriculum, adaptation by teachers at the various grade levels for their school was a common practice. Our investigation revealed a lack of congruence between the district's specified curriculum and what was being taught, especially at the secondary level.

In the second stage of our investigation it was discovered that teachers' beliefs and practices about importance, participation, and involvement in curriculum implementation tasks were more pronounced for those who were most closely attending to the curriculum prescribed by the district. The results of this study indicated a need for further research to investigate teacher beliefs and practices about curriculum implementation tasks in relation to the nature or characteristics of the curriculum being implemented, the expectations of the adopting unit, and the support system for implementing the pre-specified curriculum.

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